

Technical Paper 163
September 1959

INTERMOUNTAIN STATION
Central Reference File

No. 0.73

x 2.134

How Ohioans Choose Their Christmas Trees



KENNETH L. QUIGLEY
GLEN H. MITCHELL



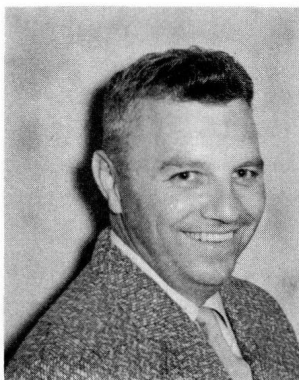
Central States Forest Experiment Station, U. S. Dept. of Agriculture, Forest Service
in cooperation with the Ohio Agricultural Experiment Station

FOREWORD

This report is a result of a cooperative project between the Central States Forest Experiment Station and the Ohio Agricultural Experiment Station. It is a part of the NCM-20 Regional Project, Marketing and Production of Christmas Trees in the North Central Region. The Ohio Christmas Tree Growers Council furnished the trees used in the displays.

Division of Forest Economics, Kenneth L. Quigley, Acting Chief
CENTRAL STATES FOREST EXPERIMENT STATION, U. S. FOREST SERVICE
111 Old Federal Building, Columbus 15, Ohio
W. G. McGinnies, Director

THE AUTHORS



KENNETH L. QUIGLEY is Acting Chief of the Station's Division of Forest Economics. He has worked for the Forest Service a total of 14 years. Sandwiched between his first 2 years with the Forest Service and his coming to the Central States Station in 1946, were jobs with Louisiana State University, Union Bag and Paper Corporation, and Brunswick Pulp and Paper Company, as well as a tour of duty with the U. S. Army. Quigley received his forestry training at Colorado State University, graduating in 1939. He

also holds a master of science degree in agricultural economics at Ohio State University. He has authored or co-authored 20 publications, chiefly in the field of forest economics.



DR. GLEN H. MITCHELL is Assistant Professor of Agricultural Economics at The Ohio State University. Specializing in agricultural marketing, he has also been a consultant with the Mendota Research Corporation, the Market Research Corporation of America, and the U. S. Forest Service. A native of Indiana, Dr. Mitchell was educated at The Ohio State University, receiving his doctorate there in 1954. He served as Staff Sergeant in the U. S. Air Force during World War II. Mitchell has authored or co-authored about a dozen

Ohio Agricultural Experiment Station bulletins and circulars.

How Ohioans Choose Their Christmas Trees

What influences a Christmas tree shopper to buy a particular Christmas tree? This Christmas an estimated two million trees will decorate Ohio homes and shops. Many of these are grown in Ohio, and all of them are sold by Ohio retailers. As a result, Ohio growers want to know what species and type of trees to produce to assure a profitable sale, and retailers want to know more about what consumers prefer so that they won't be left with trees on the lot on December 26.

To provide some of this information, a survey was conducted in Cleveland, Cincinnati, and Columbus by the Ohio Agricultural Experiment Station and the Central States Forest Experiment Station. The survey was designed to find out: (1) The species consumers prefer, (2) the grade or quality of Christmas tree they prefer, and (3) the reasons for these preferences.

The information was obtained by personal interview. Christmas trees obtained from wholesalers in the Columbus area were arranged in displays on Christmas tree lots in the three cities during the 1957 Christmas season. Displays consisted of 15 Christmas trees: Three each of Scotch pine, white pine, red pine, balsam fir, and Norway spruce. All trees were between 5 and 7 feet in height including stand and were so located that each could be examined separately. There was one tree of each species for each of the three grades (U. S. Premium, U. S. No. 1, and U. S. No. 2) recognized in the United States Standards for Christmas Trees. Displays were distributed widely throughout each city and moved each day in order to get a representative sample. As potential customers looked at trees on a lot, they were asked to answer questions about the display trees. In all, approximately 600 Christmas tree buyers were interviewed. They are believed to be fairly representative of Ohio metropolitan areas; however, they did have a slightly better average family income than the average for the State. Approximately three-fourths of them had annual family incomes between \$4,000 and \$10,000.

Species Preference

Scotch pine was definitely the most popular tree and red pine the least popular (table 1)^{1/}. Scotch pine was also the most popular second choice species. About one-fifth of the interviewees rated balsam fir and Norway spruce as either their first or second choice species.

There were some differences among consumers in the three cities. Although Scotch pine was first choice in all three, Clevelanders showed the strongest preference for this species; Columbus consumers preferred white pine and balsam fir to a greater extent than did those in the other cities; Cincinnatians showed the strongest preference for Norway spruce (table 2).

Consumers from different cities also differed as to the least desirable Christmas tree species (table 3). Those in Cleveland rated the Norway spruce least desirable; almost 50 percent of the Cincinnatians rated red pine as the least desirable Christmas tree species. Columbus consumers' decisions as to the least desirable species were very close to the average for the other two cities. Only about 10 percent of them rated Scotch pine as the least desirable species.

The consumers were also asked what species they bought the previous year (1956). Their selection was very similar to their current preference (table 4). About 70 percent of the people who had bought balsam fir and Scotch pine in 1956 indicated they still preferred those species. However, only 30 to 40 percent of the buyers of other species indicated they preferred those same species again this year.

Christmas tree buyers most often mentioned needle-holding ability, custom or family tradition, and certain appearance factors as reasons for buying a particular species. When asked which was the most important consideration, the interviewees' answers were distributed as follows:

	<u>Percent</u>
Needle-holding ability	27
Traditional species	17
Good density	16
Foliage color and length	12
Shape and balance	11
Miscellaneous (easy to decorate, availability, price, fresh appearance, etc.)	17
	<u>100</u>

^{1/} Tables in Appendix, beginning page 5.

Height Preference

Most Christmas tree buyers prefer trees 5 to 7 feet tall with a 6-foot tree being the most popular. Those who bought Scotch pine and Norway spruce preferred shorter trees than did those who bought balsam fir, red pine, or white pine (table 5).

Quality Preference

There has been a growing realization among producers, wholesalers, and retailers of Christmas trees that not only do the present-day consumers prefer a certain species, but they also are willing to pay more for the better grades of trees. This idea was borne out by the survey.

After consumers had indicated their choice of species from among the display trees, they were asked to select the particular tree of that species they liked best. As mentioned earlier, the display trees for each species were of three grades, but the grade name was not identified to the consumer. The grades used to separate the trees were the United States Standards for Christmas Trees (table 6).

After examining the trees, the consumers made the following decisions:

	Consumer's Choice (Percent)		
	(Premium)	(No. 1)	(No. 2)
Grade of tree preferred when all grades are the same price	63	25	12
Grade of tree preferred when prices are varied by grade ^{2/}	44	36	20

Apparently most consumers prefer premium trees over lower grade trees, but many of them would purchase a lower grade tree if it were much cheaper.

Childhood Home of Consumer a Factor

The area of the United States in which a consumer was raised is apparently a factor in the species preference of a consumer (table 7).

^{2/} Prices were arbitrarily set as follows: Premium--\$6.00; No. 1--\$4.00; and No. 2--\$2.00.

Apparently most people who were raised in the Midwest (a Christmas tree importing area) prefer balsam fir and Norway spruce. In contrast, the majority of consumers from the Christmas tree exporting states of Pennsylvania and Michigan prefer the pines, especially Scotch. So, Ohio Christmas tree growers who wish to export trees to other midwestern states might do well to plant more Norway spruce. Actually in 1956 Ohio growers put about 70 percent of their production into pine and only 10 percent into Norway spruce and balsam fir.^{3/}

Consumer's Income Affects Choice of Tree

When the price differential for the three grades was considered, about 50 percent of the people who made more than \$10,000 preferred premium-grade trees while only about 40 percent of the people who made the lower incomes said they would buy a premium tree. Of those making less than \$10,000, about 20 percent selected a lower grade tree than the premium because it was cheaper. Slightly less than 10 percent of those making more than \$10,000 would change their preference on the basis of price.

Conclusions

Many things influence consumers' preferences for Christmas trees. These include such tangibles as species, price, grade, and appearance as well as such intangibles as custom or family background.

Almost 40 percent of the 600 consumers interviewed said they preferred Scotch pine for their Christmas tree. Of the species on display, red pine was considered the least desirable Christmas tree. Most consumers buy a tree because of its appearance, needle-holding ability, or because of family tradition.

About two-thirds of the Christmas tree users interviewed preferred a premium-grade tree. However, if the premium-grade tree costs much more than the other trees, almost one-fifth of the buyers who prefer the premium-grade tree would switch to a lower grade tree.

With Christmas tree production constantly increasing, Christmas tree producers need to carefully consider their market and the kind and species of trees they are producing. They need to observe consumers' expressed preferences and guide their production accordingly.

^{3/} Quigley, Kenneth L. and Mitchell, Glen H. Ohio-grown Christmas trees--production and marketing. Cent. States Forest Expt. Sta. Tech. Paper 152, 17 pp., illus. 1958.

APPENDIX

Table 1.--How consumers rate various species of Christmas trees
(In percent)

Tree species	Most desirable	2nd choice	Least desirable
Scotch pine	38	25	7
Balsam fir	25	21	21
Norway spruce	19	23	22
White pine	10	18	17
Red pine	8	13	33
Total	100	100	100

Table 2.--Most preferred Christmas tree species by city
(In percent)

Tree species	Cleveland	Columbus	Cincinnati
Scotch pine	43	35	34
Balsam fir	26	29	20
Norway spruce	14	13	31
White pine	5	18	8
Red pine	12	5	7
Total	100	100	100

Table 3.--Least preferred Christmas tree species by city
(In percent)

Tree species	Cleveland	Columbus	Cincinnati
Scotch pine	4	11	5
Balsam fir	17	20	27
Norway spruce	31	22	12
White pine	25	17	9
Red pine	23	30	47
Total	100	100	100

Table 4.--Changes in species preference
(In percent)

Species	Purchased in 1956	Rated most desirable in 1957
Scotch pine	35	38
Balsam fir	27	25
Norway spruce	12	19
White pine	7	10
Red pine	6	8
Other or unknown	13	--
Total	100	100

Table 5.--Tree-height preferences
(In percent of trees by species)

Species	Tree height preferred				
	Less than: 5 ft.	5 ft.	6 ft.	7 ft.	More than 7 ft.
Scotch pine	7	28	45	15	5
Balsam fir	4	17	38	31	10
Norway spruce	12	25	44	11	8
White pine	3	15	45	25	12
Red pine	6	19	36	26	13
All species	6	21	41	22	10

Table 6.--United States Standards for Christmas Trees

Factor ^{1/}	U. S. Premium	U. S. No. 1	U. S. No. 2
Density	Medium	Medium	Light
Taper	Normal	Normal (flaring or candlestick if tree is otherwise U. S. Premium)	Normal (flaring or candlestick if tree is otherwise U. S. No. 1)
Balance	4 complete faces	3 complete faces	2 complete faces
Foliage	Fresh, clean and healthy	Fresh, clean and healthy	Fresh, fairly clean, and free from damage
Deformities	Not more serious than minor	Not more serious than minor (noticeable deformities permitted if tree otherwise U. S. Premium)	Not more serious than minor (noticeable deformities permitted if tree otherwise U. S. No. 1)

^{1/} Factor, quality, size, and species definitions are explained in United States Standards for Christmas Trees (22F.R.7767) 1957, by U. S. Agricultural Marketing Service.

Table 7.--Relation of consumer's childhood home to species preference
(In percent of consumers by State)

Childhood home	Prefer Scotch pine	Prefer red or white pine	Prefer balsam fir or Norway spruce
Pennsylvania	60	17	23
Ohio	40	20	40
West Virginia	34	28	38
Michigan	31	23	46
Kentucky	26	12	62
Midwest ^{1/}	12	18	70
Other areas ^{2/}	33	16	51

^{1/} Indiana, Illinois, Wisconsin, Minnesota, Iowa, and Missouri.

^{2/} Other states and foreign countries.

TERRITORY SERVED BY THE
CENTRAL STATES FOREST EXPERIMENT STATION
FOREST SERVICE
U. S. DEPARTMENT OF AGRICULTURE

